#### Search Results -

Terms	Documents
invert\$4 same data same (mask\$3 near5 (pin or terminal))	73

US Pre-Grant Publication Full-Text Database US Patents Full-Text Database US OCR Full-Text Database

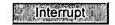
Database:

EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L1	<b>A</b>	
		Refine Searc
	超	





#### Search History

DATE: Wednesday, January 26, 2005 Printable Copy Create Case

Set Name Query

Hit Count Set Name result set

DB=PGPB, USPT, USOC; PLUR=YES; OP=OR

<u>L1</u> invert\$4 same data same (mask\$3 near5 (pin or terminal)) 73 <u>L1</u>

**END OF SEARCH HISTORY** 

side by side

#### Search Results -

Terms	Documents
L1	0

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database

US OCR Full-Text Database

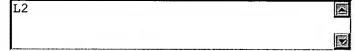
Database:

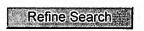
EPO Abstracts Database JPO Abstracts Database

Derwent World Patents Index

IBM Technical Disclosure Bulletins

Search:











#### Search History

DATE: Wednesday, January 26, 2005 Printable Copy Create Case

Set Name Query
side by side

 $DB=EPAB,JPAB,DWPI,TDBD;\ PLUR=YES;\ OP=OR$ 

<u>L2</u> L1

0 <u>L2</u>

result set

**Hit Count Set Name** 

 $DB = PGPB, USPT, USOC; \ PLUR = YES; \ OP = OR$ 

<u>L1</u> invert\$4 same data same (mask\$3 near5 (pin or terminal))

73 <u>L1</u>

**END OF SEARCH HISTORY** 

#### Search Results -

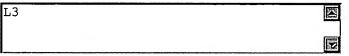
Terms	Documents
(377/41  710/100  710/305  710/52  710/72  365/189.01  365/189.07  326/21  326/52  326/62).ccls.	8685

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database

Database:

JPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:











#### **Search History**

DATE: Wednesday, January 26, 2005 Printable Copy Create Case

Set Name Query side by side	Hit Count S	Set Name result set
DB=PGPB, USPT, USOC; PLUR=YES; OP=OR		
<u>L3</u> 710/100,305,52,72;377/41;326/21,52,62;365/189.01,189.07.ccls	. 8685	<u>L3</u>
DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
<u>L2</u> L1	0	<u>L2</u>
DB=PGPB, USPT, USOC; PLUR=YES; OP=OR		
<u>L1</u> invert\$4 same data same (mask\$3 near5 (pin or terminal))	73	<u>L1</u>

**END OF SEARCH HISTORY** 

#### Search Results -

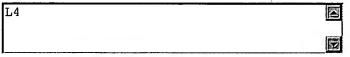
Terms	Documents	
L1 and L3	8	

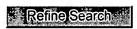
US Pre-Grant Publication Full-Text Database US Patents Full-Text Database US OCR Full-Text Database

Database:

EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:









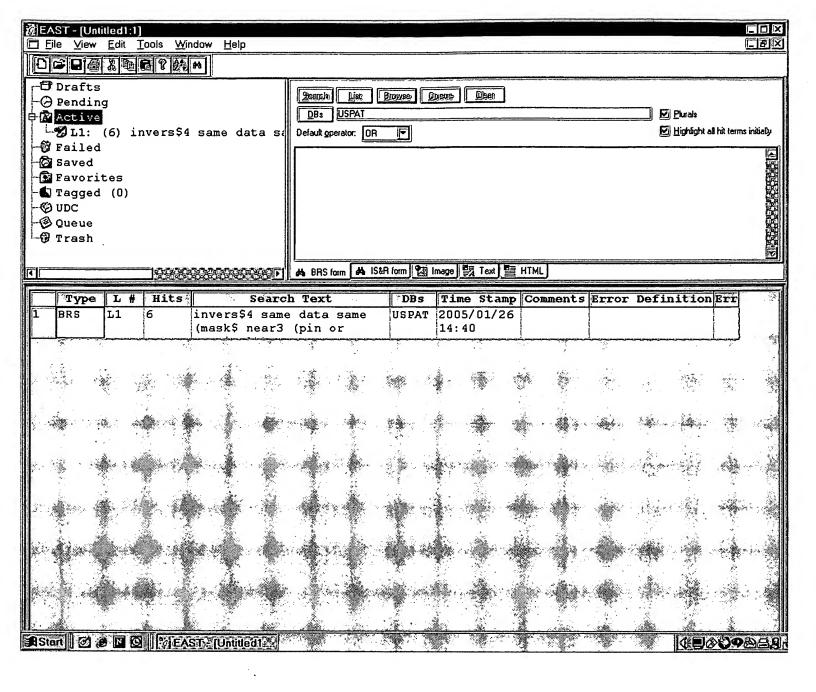


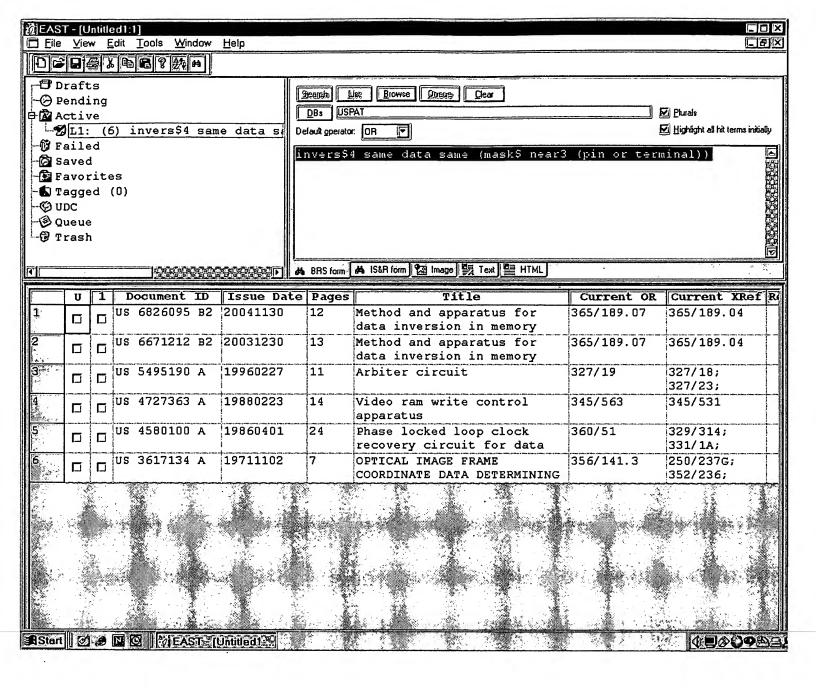
#### **Search History**

### DATE: Wednesday, January 26, 2005 Printable Copy Create Case

Set Name Query	<b>Hit Count Set Name</b>	
side by side		result set
DB=PGPB, USPT, USOC; PLUR=YES; OP=OR		
<u>L4</u> 11 and L3	8	<u>L4</u>
<u>L3</u> 710/100,305,52,72;377/41;326/21,52,62;365/189.01,189.07.ccls.	8685	<u>L3</u>
DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
<u>L2</u> L1	0	<u>L2</u>
DB=PGPB, USPT, USOC; PLUR=YES; OP=OR		
<u>L1</u> invert\$4 same data same (mask\$3 near5 (pin or terminal))	73	<u>L1</u>

#### **END OF SEARCH HISTORY**





IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE

Membership Publications/Services Standards Conferences Careers/Jobs



IEEE,	Xplore®	Welcome United States Patent and Trademark Office	
Help FAQ Terms IE	EE Peer Review Quic	k Links	» Se.
Welcome to IEEE Xplores  - Home - What Can I Access? - Log-out  Tables of Contents - Journals & Magazines - Conference Proceedings - Standards	Your search match A maximum of 50 Descending order Refine This Search You may refine you new one in the televire and data and Check to search Results Key:	rch: our search by editing the current search express	sion or enteri
Search  - By Author - Basic - Advanced - CrossRef	Results: No documents r	matched your query.	-
Member Services  - Join IEEE - Establish IEEE - Web Account - Access the - IEEE Member - Digital Library  IEEE Enterprise - Access the - IEEE Enterprise - File Cabinet			

Print Format

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanced Search | Join IEEE | Web Account |
New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting | No Robots Please | Release Notes | IEEE Online
Publications | Help | FAQ | Terms | Back to Top

Copyright © 2004 IEEE - All rights reserved

е

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE



Membership Publications/Services Standards Conferences Careers/Jobs Welcome United States Patent and Trademark Office Quick Links  $\bigcirc$ FAQ Terms IEEE Peer Review Welcome to IEEE Xplore\* O- Home Your search matched 9 of 1121826 documents. — What Can A maximum of 500 results are displayed, 15 to a page, sorted by Relevance I Access? Descending order. C Log-out **Refine This Search: Tables of Contents** You may refine your search by editing the current search expression or entering O- Journals new one in the text box. & Magazines Search invert\* and data and mask\* > Conference ☐ Check to search within this result set **Proceedings** O- Standards Results Key: JNL = Journal or Magazine CNF = Conference STD = Standard Search ( )- By Author 1 Evaluation of the MODIS vegetation index compositing algorithm us O- Basic SeaWiFS data ( )- Advanced van Leeuwen, W.J.D.; Huete, A.R.; Laing, T.W.; CrossRef Geoscience and Remote Sensing Symposium Proceedings, 1998. IGARSS '98. IEEE International, Volume: 3, 6-10 July 1998 Member Services Pages:1445 - 1447 vol.3 O- Join IEEE [PDF Full-Text (408 KB)] O- Establish IEEE [Abstract] **IEEE CNF** Web Account 2 Enhanced biclustering on expression data O- Access the **IEEE Member** Jiong Yang; Haixun Wang; Wei Wang; Yu, P.; Digital Library Bioinformatics and Bioengineering, 2003. Proceedings. Third IEEE Symposium on , 10-12 March 2003 IEEE Enterprise Pages: 321 - 327 O- Access the **IEEE Enterprise** [Abstract] [PDF Full-Text (404 KB)] **IEEE CNF File Cabinet** 3 Interval estimation from censored and masked system-failure data Doganaksoy, N.; Print Format Reliability, IEEE Transactions on , Volume: 40 , Issue: 3 , Aug. 1991 Pages: 280 - 286 [Abstract] [PDF Full-Text (500 KB)] IEEE JNL 4 M nit ring detailed land surface changes using an airb rne multispe

# digital camera system

Stow, D.; Hope, A.; Nguyen, A.T.; Phinn, S.; Benkelman, C.A.; Geoscience and Remote Sensing, IEEE Transactions on , Volume: 34 , Issue: 5 , Sept. 1996 Pages:1191 - 1203

h e eee ge che che с е

eee

e

e c e

#### [Abstract] [PDF Full-Text (1780 KB)] IEEE JNL

# 5 A versatile functi n generat r chip implemented in an I/SUP 2/L ga array

Bahraman, A.; Levie, J.H.; Chang, S.Y.S.; Hopkins, M.A.; Hartmann, R.A.; Sr. J.R.;

Solid-State Circuits, IEEE Journal of , Volume: 17 , Issue: 4 , Aug 1982 Pages:671 - 676

[Abstract] [PDF Full-Text (1104 KB)] IEEE JNL

#### 6 Inversion of modified beamformed array data

Scheibner, D.; Parks, T.;

Acoustics, Speech, and Signal Processing, IEEE International Conference on ICASSP '85. , Volume: 10 , Apr 1985

Pages:834 - 837

[Abstract] [PDF Full-Text (136 KB)] IEEE CNF

# 7 Integrated detectors for embedded optical interconnections on electroards, modules, and integrated circuits

Sang-Yeon Cho; Sang-Woo Seo; Brooke, M.A.; Jokerst, N.M.; Selected Topics in Quantum Electronics, IEEE Journal of , Volume: 8 , Issue: 6 , Nov.-Dec. 2002 Pages:1427 - 1434

[Abstract] [PDF Full-Text (538 KB)] IEEE JNL

# 8 2002 IEEE International Symposium on Circuits and Systems. Proceedings (Cat. No.02CH37353)

Circuits and Systems, 2002. ISCAS 2002. IEEE International Symposium on , Volume: 2 , 26-29 May 2002

[Abstract] [PDF Full-Text (9198 KB)] IEEE CNF

#### 9 Inverted thin-film transistors with a simple self-aligned lightly dope drain structure

Liu, C.-T.; Yu, C.-H.D.; Kornblit, A.; Lee, K.-H.; Electron Devices, IEEE Transactions on , Volume: 39 , Issue: 12 , Dec. 1992 Pages: 2803 - 2809

[Abstract] [PDF Full-Text (700 KB)] IEEE JNL

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanced Search | Join IEEE | Web Account |
New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting | No Robots Please | Release Notes | IEEE Online
Publications | Help | FAQ | Terms | Back to Top

Copyright © 2004 IEEE — All rights reserved

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE



Membership Publications/Services Standards Conferences Careers/Jobs

Welcome
United States Patent and Trademark Office



Malaama ta IEEE Valaras

FAQ Terms IEEE Peer Review

**Quick Links** 



#### Welcome to IEEE Xplores

O- Home
O- What Can
I Access?

O- Log-out

Search Results [PDF FULL-TEXT 538 KB] PREV NEXT DOWNLOAD CITATION

RIGHTS LINK

#### **Tables of Contents**

O- Journals & Magazines

O- Conference Proceedings

O- Standards

#### Search

O- By Author

O- Basic

O- Advanced

O- CrossRef

#### **Member Services**

O- Join IEEE

O- Establish IEEE
Web Account

O- Access the IEEE Member Digital Library

#### **IEEE** Enterprise

O- Access the IEEE Enterprise File Cabinet

Print Format

# Integrated detectors for embedded optical interconnections on electrical boards, modules, and integrated circuits

Sang-Yeon Cho Sang-Woo Seo Brooke, M.A. Jokerst, N.M.

Nat. Sci. Found. Packaging Res. Center, Georgia Inst. of Technol., Atlanta, GA This paper appears in: Selected Topics in Quantum Electronics, IEEE J u

Publication Date: Nov.-Dec. 2002

On page(s): 1427 - 1434 Volume: 8 , Issue: 6 ISSN: 1077-260X

Inspec Accession Number: 7517919

#### **Abstract:**

Significant opportunities exist for optical interconnections at the board, modu level if compact, low-loss, high-data-rate optical interconnections can be inte these electrical interconnection systems. To create such an integrated optoelectronic/electronic microsystem, mask-based alignment of the optical interconnection waveguide, optoelectronic active devices, and interface circuit attractive from a packaging alignment standpoint. This paper describes an int process for creating optical interconnections which can be integrated in a post format onto standard boards, modules, and integrated circuits. These optical interconnections utilize active thin-film optoelectronic components embedded waveguide/interconnection substrate, thus eliminating the need for optical be elements and their alignment, and providing an electrical output on the subst an optical interconnection. These embedded optical interconnections are repo using BCB polymer optical waveguides with embedded InGaAs-based thin-film metal-semiconductor-metal (I-MSM) photodetectors on an Si substrate. These interconnections have been fabricated and tested, and the coupled optical sig waveguide to the embedded photodetector was theoretically modeled at 56.4 was supported by an experimental estimate of 47.8%. The measured full-widmaximum of the electrical pulse from the MSM photodetector embedded in th waveguide was 16.73 ps for an input 500-fs optical laser pulse.

#### **Index Terms:**

<u>III-V semiconductors</u> gallium arsenide indium compounds integrated circuit packagin optoelectronics metal-semiconductor-metal structures optical films optical interconne

optical planar waveguides optical polymers photodetectors substrates 16.73 ps 50 polymer optical waveguides InGaAs InGaAs-based thin-film inverted metal-semicond photodetectors MSM photodetector Si Si substrate active thin-film optoelectronic conductor electrical boards electrical interconnection systems electrical output electrical pulse optical interconnections embedded photodetector high-data-rate optical interconnection integrated circuits integrated detectors interface circuits microsystem modules optical interconnections optical interconnections optical is optical testing optoelectronic active devices packaging alignment postprocessing waveguide/interconnection substrate

#### Documents that cite this document

There are no citing documents available in IEEE Xplore at this time.

#### Reference list:

1, W. J. Dally and J. Poulton, "Transmitter equalization for 4-Gbps signaling," pp. 48-56, 1997.

[Abstract] [PDF Full-Text (140KB)]

- 2, C. Yoo, "High-speed DRAM interface," *IEEE Potentials*, vol. 20, pp. 33-34, [Abstract] [PDF Full-Text (173KB)]
- 3, W. Ryu, J. Lee, H. Kim, S. Ahn, N. Kim, B. Choi, D. Kam, and J. Kim, "RF i for multi-Gbit/s board-level clock distribution," *IEEE Trans. Adv. Packag.*, vol. 398-407, 2000.

[Abstract] [PDF Full-Text (656KB)]

- 4, K. A. Jenkins and J. P.Eckhardt, "Measuring jitter and phase error in micro phase-locked loops," *IEEE Des. Test. Comput.*, vol. 17, pp. 86-93, 2000. [Abstract] [PDF Full-Text (116KB)]
- 5, M. Horowitz, C.-K. K.Yang, and S.Sidiropoulos, "High-speed electrical sing Overview and limitations," *IEEE Micro*, pp. 12-24, 1998.
  [Abstract] [PDF Full-Text (196KB)]
- 6, S. K. Tewksbury and L. A.Hornak, "Optical clock distribution in electronic s *VLSI Signal Process.*, vol. 16, pp. 225-246, 1997.

  [CrossRef] [Buy Via Ask\*IEEE]
- 7, M. Rassaian and M. W.Beranek, "Quantitative characterization of 96.5Sn3. 80Au20Sn optical fiber solder bond joints on silicon micro-optical bench subst *Trans. Adv. Packag.*, vol. 22, pp. 86-93, 1999. [Abstract] [PDF Full-Text (308KB)]
- 8, S. J. Walker and J. Jahns, "Optical clock distribution using integrated free-optics," *Opt. Commun.*, vol. 90, pp. 359-371, 1992.
  [CrossRef] [Buy Via Ask\*IEEE]
- 9, P. J. Delfyett, D. H.Hartman, and S. Z.Ahmad, "Optical clock distribution u mode-locked semiconductor laser-diode system," *J. Lightwave Technol.*, vol. ! 1649, 1991.

[Abstract] [PDF Full-Text (360KB)]

- 10, B. Bihari, J. Gan, L. Wu, Y. Liu, S. Tang, and R. T. Chen, "Optical clock di supercomputers using polyimide-based waveguides," in *Proc. Opto. Intercon.* Jose, CA, Jan. 1999, pp. 123-133.
  [Buy Via Ask\*IEEE]
- 11, D. A. B.Miller, "Rationale and challenges for optical interconnects to elect *Proc. IEEE*, vol. 88, pp. 728-749, 2000.

  [Abstract] [PDF Full-Text (340KB)]
- 12, N. M. Jokerst, M. A.Brooke, J.Laskar, D. S.Wills, A. S.Brown, M.Vrazel, S. and J. J.Chang, "Microsystem optoelectronic integration for mixed multisignal *IEEE J. Select. Topics Quantum Electron.*, vol. 6, pp. 1231-1239, 2000.

  [Abstract] [PDF Full-Text (208KB)]
- 13, S. Kollakowski, A.Strittmatter, E.Dröge, E. H.Böttcher, and Bimberg, "65 InGaAs/InAlGaAs/InP waveguide-integrated photodetectors for the 1.3-1.55 \{m}\\$ wavelength regime," Appl. Phys. Lett., vol. 74, pp. 612-614, 1999. [CrossRef] [Buy Via Ask\*IEEE]
- 14, E. H. Böttcher, H.Pfitzenmaier, E.Dröge, S.Kollakkowski, A.Stittmatter, D and R.Steingrüber, "Distributed waveguide-integrated InGaAs MSM photodete high-efficiency and ultra-wideband operation," in *Proc. IEEE 11th Int. Conf. Ir Phosphide and Related Materials*, 1999, pp. 79-82.

  [Abstract] [PDF Full-Text (364KB)]
- 15, S. Kollakowski, E.Dröge, E. H.Böttcher, A.Strittmatter, O.Reimann, and C "Waveguide-Integrated InP/InGaAs/InAlGaAs MSM photodetector for operatio 1.55 \$\mu\hbox{m}\$," in *Proc. IEEE 10th Int. Conf. Indium Phosphide and I Materials*, 1998, pp. 266-268.
  [Abstract] [PDF Full-Text (380KB)]
- 16, C. H. Buchal, A. Roelofs, M. Siegert, and M. Löken, "Polymeric strip wave their connection to very thin ultrafast metal-semiconductor-metal detectors," *Soc. Symp. Proc.*, vol. 597, 2000, pp. 97-102.
  [Buy Via Ask\*IEEE]
- 17, F. Gouin, L. Robitaille, C. L.Callender, J.Noad, and C.Almeida, "A 4\$\,\tim optoelectronic switch matrix integrating an MSM array with polyimide optical waveguides," *Proc. SPIE*, vol. 3290, pp. 287-295, 1997.
  [Buy Via Ask\*IEEE]
- 18, C. L. Callender, L. Robitaille, J. P.Noad, F.Gouin, and C.Almeida, "Optimiz metal-semiconductor-metal (MSM) photodetector arrays integrated with polyi waveguides," *Proc. SPIE*, vol. 2918, pp. 211-221, 1997.

  [Abstract] [PDF Full-Text (164KB)]
- 19, O. Vendier, N. M.Jokerst, and R.Leavitt, "High efficiency inverted GaAs-B photodetectors," *Electron. Lett.*, vol. 32, no. 4, pp. 394-395, Feb. 1996.
  [Abstract] [PDF Full-Text (240KB)]
- 20, O. Vendier, N. M.Jokerst, and R. P.Leavitt, "Thin-film inverted MSM photo *IEEE Photon. Technol. Lett.*, vol. 8, pp. 266-268, 1996.

be

be

#### [Abstract] [PDF Full-Text (352KB)]

- 21, D. G. Ivey, P. Jian, R. Bruce, and G. Knight, "Microstructural analysis of *I* contacts to p-type InGaAs," *J. Mat. Sci.: Mat. in Electron.*, vol. 6, pp. 219-227 [Buy Via Ask\*IEEE]
- 22, N. M. Jokerst, M. A.Brooke, O.Vendier, S.Wilkinson, S.Fike, M.Lee, E.Twy J.Cross, B.Buchanan, and S.Wills, "Thin-film multimaterial optoelectronic integricults," *IEEE Trans. Comp., Packag., Manufact. Technol. B*, vol. 1, pp. 97-10 [Abstract] [PDF Full-Text (2044KB)]
- 23, N. M. Jokerst, "Hybrid integrated optoelectronics: Thin film devices bondom substrates," *Int. J. High Speed Electron. Syst.*, vol. 8, pp. 325-356, 1997. [Buy Via Ask\*IEEE]
- 24, Y. Wang, S. Fike, M. G. Allen, and N. M. Jokerst, "Measurement of adhesi thin films using the blister test," in *Proc. Annu. Meeting Adhesion Soc.* Orland 1994.

[Buy Via Ask\*IEEE]

25, N. Jokerst, M. Brooke, O. Vendier, S. Wilkinson, S. Fike, M. Lee, E. Twyfc Cross, B. Buchanan, and S. Wills, "Thin film multimaterial optoelectronic integicircuits," *IEEE Trans. Comp., Packag., Manufact. Technol. B*, vol. 19, no. 1, pp. Feb. 1996.

[Abstract] [PDF Full-Text (2044KB)]

26, R. Kirchoff, C. Carriere, K. Bruza, N. Rondan, and R. Sammler, "Benzocyc A new class of high performance polymer," *J. Macro. Sci.-Chem.*, vol. 28, pp. 1991.

[Buy Via Ask\*IEEE]

- 27, S. Wolff, A. R. Giehl, M. Renno, and H. Fouckhardt, "Metallic waveguide r polymer film waveguides," *Appl. Phys. B*, vol. 73, pp. 623-627, 2001. [CrossRef] [Buy Via Ask\*IEEE]
- 28, G. Fischbeck, R. Moosburger, M.Topper, and K.Peterman, "Design concersinglemode polymer waveguides," *Electron. Lett.*, vol. 32, pp. 212-213, 1996 [Abstract] [PDF Full-Text (256KB)]
- 29, Y. G. Zhang, A. Z. Li, and J. X. Chen, "Improved performance of InAlAs-I MSM photodetectors with graded superlattice structure grown by gas source I Photon. Technol. Lett., vol. 8, pp. 830-832, 1996.
  [Abstract] [PDF Full-Text (256KB)]
- 30, S. Kollakowski, E. H.Bottcher, A.Strittmatter, and D.Bimberg, "High-spee InGaAs/InAlGaGs/InP waveguide-integrated MSM photodetectors for 1.3–1.5! \hbox{m}\$ wavelength range," *Electron. Lett.*, vol. 34, pp. 587-589, 1998. [Abstract] [PDF Full-Text (536KB)]
- 31, E. H. Bottcher, E. Droge, A. Strittmatter, and D.Bimberg, "Polarization-in high-speed InGaAs metal-semiconductor-metal," *Electron. Lett.*, vol. 33, pp. 91997.

be

#### [Abstract] [PDF Full-Text (392KB)]

32, R. Scarmozzino, A.Gopinath, R.Pregla, and S.Helfert, "Numerical technique modeling guided-wave photonic devices," *IEEE J. Select. Topics Quantum Elec* 6, pp. 150-162, 2000.

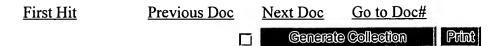
[Abstract] [PDF Full-Text (216KB)]

33, G. R. Hadley, "Wide-angle beam propagation using Pade approximant op *Opt. Lett.*, vol. 25, pp. 1426-1428, 1992.
[Buy Via Ask\*IEEE]

Search Results [PDF FULL-TEXT 538 KB] PREV NEXT DOWNLOAD CITATION

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanced Search | Join IEEE | Web Account |
New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting | No Robots Please | Release Notes | IEEE Online
Publications | Help | FAQ | Terms | Back to Top

Copyright © 2004 IEEE — All rights reserved



L4: Entry 1 of 8 File: PGPB Aug 21, 2003

PGPUB-DOCUMENT-NUMBER: 20030158981

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030158981 A1

TITLE: Memory bus polarity indicator system and method for reducing the affects of

simultaneous switching outputs (SSO) on memory bus timing

PUBLICATION-DATE: August 21, 2003

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

LaBerge, Paul A. Shoreview MN US

APPL-NO: 10/ 081652 [PALM]
DATE FILED: February 21, 2002

INT-CL: [07] G06 F 13/00

US-CL-PUBLISHED: 710/100 US-CL-CURRENT: 710/100

REPRESENTATIVE-FIGURES: 3

#### ABSTRACT:

A method and system transfer read <u>data</u> from a memory device having a <u>data</u> bus and a <u>data masking pin adapted to receive a masking</u> signal during write operations of the memory device. The method includes placing a sequence of read <u>data</u> words on the <u>data</u> bus and applying a <u>data</u> bus inversion signal on the <u>data masking pin</u>, the <u>data</u> bus inversion signal indicating whether the <u>data</u> contained each read <u>data</u> word has been <u>inverted</u>. Another method and system transfer <u>data</u> over a <u>data</u> bus. The method includes generating a sequence of <u>data</u> words, at least one <u>data</u> word including <u>data</u> bus inversion <u>data</u>. The sequence of <u>data</u> words is applied on the <u>data</u> bus and is thereafter stored. The <u>data</u> bus inversion <u>data</u> is applied to <u>invert or not invert the data</u> contained in the stored <u>data</u> words.

Previous Doc Next Doc Go to Doc#

First Hit Fwd Refs

Previous Doc Next Doc Go to Doc#

**End of Result Set** 

Generate Collection | Print

L4: Entry 8 of 8 File: USPT Feb 28, 1995

US-PAT-NO: 5394366

DOCUMENT-IDENTIFIER: US 5394366 A

TITLE: Enabling data access of a unit of arbitrary number of bits of data in a

semiconductor memory

DATE-ISSUED: February 28, 1995

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

'Miyamoto; Takayuki Hyogo JP

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Mitsubishi Denki Kabushiki Kaisha Tokyo JP 03

APPL-NO: 07/ 925152 [PALM]
DATE FILED: August 6, 1992

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO APPL-DATE

JP 3-200278 August 9, 1991

INT-CL: [06] G11 C 7/00

US-CL-ISSUED: 365/195; 365/196, 365/193, 365/189.01, 365/189.03 US-CL-CURRENT: 365/195; 365/189.01, 365/189.03, 365/193, 365/196

FIELD-OF-SEARCH: 365/195, 365/189.01, 365/196, 365/221, 365/189.02, 365/189.03,

365/189.12, 365/230.02, 365/230.09, 365/193, 364/514, 364/516

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Segrah Selected	* Seeich AUL	(Glear)

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4669064	May 1987	Ishimoto	365/195
4897818	January 1990	Redwine et al.	365/195
5313624	May 1994	Harriman et al.	395/575

#### OTHER PUBLICATIONS

"Home VTR Containing Field Memory for Correcting Crossbar and Skew Distortion in Search Mode", Nikkei Electronics, vol. 406, Oct. 20, 1986, pp. 195-214.

ART-UNIT: 251

PRIMARY-EXAMINER: LaRoche; Eugene R.

ASSISTANT-EXAMINER: Hoang; Huan

ATTY-AGENT-FIRM: Lowe, Price, LeBlanc & Becker

#### ABSTRACT:

A DRAM device includes a read control circuit for inhibiting read out of one or more bits of a multi-bit data output from a plurality of memory cells in response to a bit designating signal for specifying the one or more bits. By arbitrarily setting the number of bits to be output from the DRAM device and combining that output with data from one or more additional memory devices, data of an arbitrary number of bits can be generated at a high speed.

13 Claims, 17 Drawing figures

Previous Doc Next Doc Go to Doc#

First Hit Fwd Refs

Previous Doc

Next Doc

Go to Doc#

**End of Result Set** 

Generate Collection Print

L5: Entry 1 of 1

File: USPT

Mar 30, 2004

US-PAT-NO: <u>6714460</u>

DOCUMENT-IDENTIFIER: US 6714460 B2

TITLE: System and method for multiplexing data and data masking information on a

data bus of a memory device

DATE-ISSUED: March 30, 2004

INVENTOR-INFORMATION:

NAME

CITY STATE ZIP CODE COUNTRY

LaBerge; Paul A. Shoreview MN

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Micron Technology, Inc. Boise ID 02

APPL-NO: 10/ 081653 [PALM]
DATE FILED: February 21, 2002

INT-CL: [07] <u>G11</u> <u>C</u> <u>7/00</u>

US-CL-ISSUED: 365/189.01; 365/195 US-CL-CURRENT: 365/189.01; 365/195

FIELD-OF-SEARCH: 365/189.01, 365/195, 365/230.06, 365/235

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

## Search Selected Search ALL Clear

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5539430</u>	July 1996	Priem et al.	345/545
5657287	August 1997	McLaury et al.	365/230.01
6011727	January 2000	Merritt et al.	365/189.02
6269103	July 2001	Laturell	370/458

ART-UNIT: 2824

PRIMARY-EXAMINER: Le; Vu A.

ATTY-AGENT-FIRM: Dorsey & Whitney LLP

#### **ABSTRACT:**

A method and system masking data being written to a memory device having a data bus. One method includes applying masking data on the data bus, storing the masking data in the memory device, applying write data on the data bus, storing the write data in the memory device, and applying the stored masking data to mask the stored write data.

53 Claims, 4 Drawing figures

Previous Doc Next Doc Go to Doc#

